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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,555	12/10/2003	Richard J. Whiting	62873.7	8783

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EXAMINER

LORENZO, JERRY A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,555

Applicant(s)

WHITING, RICHARD J.

Examiner

Jerry A. Lorengo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 18-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8 and 10-17 is/are rejected.
- 7) ☒ Claim(s) 3-7 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/10/7/10/11/1/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

(1)

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-17 and 26-29, drawn to a method for making a rock laminate, classified in class 156, subclass 344.
- II. Claims 18-25, drawn to a rock laminate, classified in class 428, subclass 15.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as providing a rock slab of the desired thickness and laminating a polymer to one surface thereof.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter as shown by their different classification, restriction for examination purposes as indicated is proper.

This application contains claims directed to the following patentably distinct species of the claimed invention:

Group I, Species A, Claims 1-17 drawn to a method for making a rock laminate; and

Group I, Species B, Claims 26-29, drawn to a method for producing a rock slab having a desired thickness.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

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Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Mr. Robert Ward on December 8, 2004 a provisional election was made without traverse to prosecute the invention of Group I, Species A, claims 1-17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 18-29 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

(2)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8, 10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,063,982 to Bourke.

Regarding applicant claim 1, Bourke discloses a method of making a rock laminate comprising the steps of (abstract; column 3, line 67 to column 4, line 28):

(1) Providing a rock having an exposed surface (column 3, lines 67-68);

(2) Applying a polymer resin (adhesive) to at least a portion of the exposed surface of the rock such that the two are bonded (column 4, lines 1-5);

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(3) Cutting the rock at a distance below the exposed surface which is bonded to the polymer (column 4, lines 14-17); and

(4) Lifting the portion of the polymer and the corresponding portion of rock bonded thereto away from the rock thus exposing a new surface of the rock (column 4, lines 19-27).

Regarding applicant claim 2, Bourke disclose that the process may be repeated by (column 4, lines 16-27):

(1) Applying a polymer (adhesive) to at least a portion of the newly exposed surface of the rock such that the two are bonded;

(2) Cutting the rock at a distance below the newly exposed surface which is bonded to the polymer; and

(3) Lifting the portion of the polymer and the corresponding portion of rock bonded thereto away from the rock thus exposing another new surface of the rock.

Regarding applicant claim 8, Bourke discloses that the polymer resin (adhesive) is cured (dried) after application to the exposed surface of the rock (column 4, lines 1-4).

Regarding applicant claim 10, Bourke discloses that the adhesive polymer resin utilized may be an epoxy which is cured under the effect of a heat curing technique (column 2, lines 33-35).

Regarding applicant claim 14, Bourke discloses that the rock may comprise a metamorphic rock, i.e., marble (column 7, lines 62-64).

(3)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,063,982 to Bourke in view of U.S. Patent No. 5,267,499 to Othon.

Bourke, as set forth in section (2), above, disclose a method of making a rock laminate comprising the steps of: Providing a rock having an exposed surface; applying a polymer (adhesive) to at least a portion of the exposed surface of the rock such that the two are bonded; cutting the rock at a distance below the exposed surface which is bonded to the polymer; and lifting the portion of the polymer and the corresponding portion of rock bonded thereto away from the rock thus exposing a new surface of the rock. Although they disclose that the rock may comprise, for example, marble, granite or onyx, they do not specifically disclose the rock type or species set forth in claims 15 and 16. They are also silent as to the application of a sealer to the rock side of the rock laminate as set forth in applicant claim 13.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize other rock or stone types in the method of Bourke, such as sandstone (a sedimentary rock), as per applicant claims 15 and 16, motivated by the fact that Othon, also drawn to methods for the formation of rock laminates, discloses that highly dense and hard rocks as well as soft rock such as sandstone (a sedimentary rock) are usable in such a process.¹

It would have also been obvious to one of ordinary skill in the art at the time of invention to provide, as per applicant claim 13, the exposed rock surface of the laminate with a sealer motivated by the fact that Othon discloses that the application of a urethane protective coating is typically utilized during finishing to provide a desired effect (column 3, lines 62-68).

¹ The method of Othon is analogous to that of Bourke wherein the exposed surface of a rock slab is adhesively bonded by a resin to a substrate, followed by sawing of the rock below the adhesively bonded exposed surface after which the rock laminate is separated from the newly exposed rock slab surface (column 2, line 62 to column 3, line 28).

(4)

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,063,982 to Bourke in view of U.S. Patent No. 4,781,870 to Talbert.

Bourke, as set forth in section (2), above, discloses the application of the epoxy polymer resin adhesive to the exposed surface of the rock substrate. Although he does not specifically disclose, as per applicant claim 11, the use of a mold during the application of the adhesive, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize a mold (a.k.a. a dam) to control the spreading of the epoxy on the exposed rock surface motivated by the fact that Talbert, also drawn to methods for the application of epoxy polymer resin onto a substrate, disclose that the use of a mold or dam 50 on a surface to which an epoxy is to be applied enables the spreading of the epoxy over the surface to be controlled within the perimeter of the mold/dam 50 (Figures 5b and 5c; column 7, lines 31-42).

(5)

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,063,982 to Bourke in view of Meath.²

Although Bourke discloses that the adhesive resin utilized may comprise a heat-cured epoxy, he does not specifically disclose, as per applicant claim 12, the use of an additive in the adhesive polymer resin.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the epoxy polymer resin adhesive of Bourke with an additive such as a diluent, filler or other modifier, motivated by the fact that Meath, also drawn to epoxy polymer resins utilized as adhesives, discloses that such additive or typically added to (in the case of diluents) reduce viscosity and allow the use of large amounts of filler; to (in the case of fillers) enhance or obtain specific properties and reduce cost; or (in the case of elastomeric modifiers) to increase the peel strength of the epoxy resin adhesive (pp. 345-0355).

² Meath, A.R., "Epoxy Resin Adhesives", in *Handbook of Adhesives*, 3rd.ed. Irving Skeist, editor, 1990, Chapter 19, pp. 347-358.

(6)

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,063,982 to Bourke in view of U.S. Patent No. 2,050,761 to Newsom.

Bourke, as set forth in section (2), above, disclose a method of making a rock laminate comprising the steps of: Providing a rock having an exposed surface; applying a polymer (adhesive) to at least a portion of the exposed surface of the rock such that the two are bonded; cutting the rock at a distance below the exposed surface which is bonded to the polymer; and lifting the portion of the polymer and the corresponding portion of rock bonded thereto away from the rock thus exposing a new surface of the rock.

Although Bourke does not specifically disclose, as per applicant claim 17, wherein the rock provided is in situ, it would have been obvious to one of ordinary skill in the art at the time of invention that the method of Bourke would have been applicable to rock slabs in situ, i.e., rocks located in the quarry, motivated by the fact that it is well known in the art, such as shown by Newsom, that rock slabs are typically quarried by the repetitive sawing of vertical and horizontal flat faces into the in situ rock. As such, the skilled artisan would have been appreciative of the fact that the application of the adhesive polymer resin to the flat exposed face of a rock section followed by sawing would be capable of forming rock laminates at the quarry site from in situ rock.

(7)

Allowable Subject Matter

Claims 3-7 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Both Bourke and Othon, as set forth above, disclose methods of making a rock laminate comprising the steps of: Providing a rock having an exposed surface; applying a polymer (adhesive) to at least a portion of the exposed surface of the rock such that the two are bonded; cutting the rock at a distance below the exposed surface which is bonded to the polymer; and lifting the portion of the polymer and the corresponding portion of rock bonded thereto away from the rock thus exposing a new surface of the rock

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Although it is also known, as taught by U.S. Patent No. 5,375,385 to Feder, to form flexible rock laminates composed of a plurality of adhesively hinged rock "slats," none of the prior art of record specifically teaches or suggests the method set forth in applicant 3 wherein the formed rock laminate is "flexible."

Furthermore, although both Bourke and Othon disclose the application of an adhesive polymer resin to the exposed rock surface prior to the removal of a bonded section of the rock from the main rock body, none of the prior art of record specifically teach or suggest, as per applicant claim 9, that the curing of the adhesive occurs after the adhesively bonded rock surface is lifted from the main body of the rock. Rather, Bourke and Othon teach that it is imperative that the adhesive polymer resin is cured prior to rock lift-off in order that the segmented portion is properly supported in order to ovoid breakage of the rock laminate.

(8)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (571) 272-1233. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J.A. Lorengo, Primary Examiner

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January 21, 2005